

Supplementary Table S1. Donor Characteristics and Clinical Information

No.	Sex	Age, y	Cause of Death	Time Between Death and Fixation, h
1	Male	52	Cerebral hernia	3
2	Female	48	Intracerebral hemorrhage	2
3	Female	46	Intracerebral hemorrhage	1
4	Male	54	Intracerebral hemorrhage	2
5	Male	55	Intracerebral hemorrhage	2
6	Male	37	Craniocerebral trauma	2
7	Female	51	Craniocerebral trauma	2
8	Male	55	Intracerebral hemorrhage	1
9	Female	64	Cerebrovascular accident	3
10	Female	60	Cerebrovascular accident	3

Supplementary Table S2. List of Assays Used in AqH Detection

Factors	Assays	Company	Presented
ROS	Chemiluminescence analyzing system	Tohoku Electronic Industrial	chemiluminescence counts/10s
8-OHdG	Enzyme-linked immunosorbent assay	IBL International GmbH	ng/mL
MDA	Lipid Peroxidation (MDA) Colorimetric/Fluorometric Assay Kit	Bio Vision	nmol/L
SOD	SOD Activity Kit	Nanjing Jiancheng Bioengineering Institute	U/mL
GSH/GSSG ratio	GSH/GSSG Ratio Detection Assay Kit	Abcam	-
SASP	Multiplex Immunoassay	Thermo Fisher Scientific	pg/mL
SA- β -gal	Senescence β -Galactosidase Staining Kit	Cell Signaling Technology	-

AqH, aqueous humor; 8-OHdG, 8-hydroxydeoxyguanosine; GSH, reduced glutathione; GSSG, oxidized glutathione; MDA, malondialdehyde; ROS, reactive oxygen species; SA- β -gal, senescence-associated beta-galactosidase; SASP, senescence-associated secretory phenotype.

Supplementary Table S3. List of Antibodies Used for Immunofluorescence

Primary Antibody	Type	Company	Catalog #	Dilution	Secondary Antibody	Company	Catalog #
8-OHdG	M	Abcam	ab62623	1 : 200	Anti-mouse IgG conjugated to Alexa Fluor 555	Cell Signaling Technology	#4409
p16	M	Abcam	ab108349	1 : 100	Anti-rabbit IgG conjugated to Alexa Fluor 555	Cell Signaling Technology	#4413
p21	M	Novus Biologicals	NBP2-29463	1 : 100	Anti-mouse IgG conjugated to Alexa Fluor 555	Cell Signaling Technology	#4409
p53	M	Abcam	ab237976	1 : 100	Anti-mouse IgG conjugated to Alexa Fluor 555	Cell Signaling Technology	#4409
Bcl-2	M	Cell Signaling Technology	#3498	1 : 100	Anti-rabbit IgG conjugated to Alexa Fluor 555	Cell Signaling Technology	#4413
Bcl-xL	M	Novus Biologicals	NBP2-32917	1:200	Anti-mouse IgG conjugated to Alexa Fluor 555	Cell Signaling Technology	#4409
Bax	M	Invitrogen	MA5-14003	1:100	Anti-mouse IgG conjugated to Alexa Fluor 555	Cell Signaling Technology	#4409
Cleaved caspase-3	M	Cell Signaling Technology	#9664	1:500	Anti-rabbit IgG conjugated to Alexa Fluor 555	Cell Signaling Technology	#4413
CREB	M	Cell	#9197	1:800	Anti-rabbit	Cell	#4413

					Signaling Technology	IgG conjugated to Alexa Fluor 555	Signaling Technology	
SIRT1	M	Abcam	ab110304	1 : 200	Anti- mouse IgG conjugated to Alexa Fluor 555	Cell Signaling Technology	#4409	

M, Monoclonal; P, polyclonal.

Bcl-2, B cell lymphoma-2; Bcl-xL, B-cell lymphoma-extra-large; CREB, cAMP response element binding protein; 8-OHdG, 8-hydroxydeoxyguanosine; SIRT1, Sirtuin1.